

(19)日本国特許庁 (JP)

(12) 公開特許公報 (A)

(11)特許出願公開番号

特開2002-156950

(P2002-156950A)

(43)公開日 平成14年5月31日 (2002.5.31)

(51)Int.Cl. ⁷	識別記号	F I	マーク [*] (参考)
G 0 9 G	3/36	C 0 9 G	3/36
G 0 2 F	1/133	C 0 2 F	1/133
	1/13357	C 0 9 F	9/00
G 0 9 F	9/00	C 0 9 G	3/20
G 0 9 G	3/20		
	5 3 5		2 H 0 9 1
	3 3 7		5 3 5
	6 1 1		2 H 0 9 3
			3 3 7 B
			5 C 0 0 6
			6 1 1 A
			5 C 0 8 0
			6 4 1 R
			5 G 4 3 6

審査請求 未請求 請求項の数17 OL (全 53 頁) 最終頁に続く

(21)出願番号 特願2000-379779(P2000-379779)

(22)出願日 平成12年12月8日 (2000.12.8)

(31)優先権主張番号 特願2000-278672(P2000-278672)

(32)優先日 平成12年9月8日 (2000.9.8)

(33)優先権主張国 日本 (JP)

(71)出願人 000005108

株式会社日立製作所

東京都千代田区神田駿河台四丁目6番地

(71)出願人 000233136

株式会社日立画像情報システム

神奈川県横浜市戸塚区吉田町292番地

(72)発明者 新田 博幸

神奈川県川崎市麻生区王禅寺1099番地 株

式会社日立製作所システム開発研究所内

(74)代理人 100075096

弁理士 作田 康夫

最終頁に続く

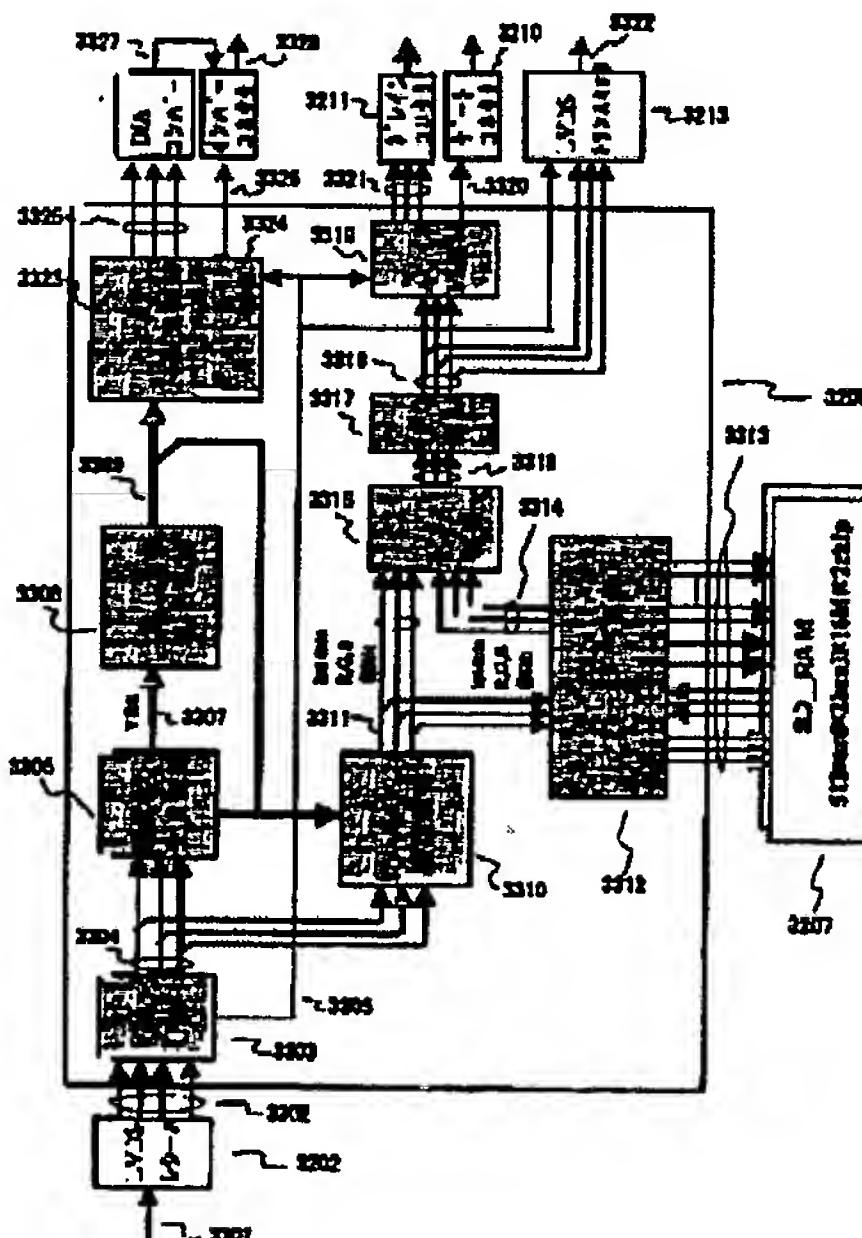
(54)【発明の名称】 液晶表示装置

(57)【要約】

【課題】本発明の課題は、表示画像の輝度を効率よく向上させると共に、光源の発熱を抑制することにある。

【解決手段】本発明は、複数の画素が配置されたパネルと、これら複数の画素に表示される画像を可視化する光源と、この光源を制御する制御回路及び、映像信号の階調特性制御回路を備え、上記光源の制御回路は第1の強度を有する電流を光源に供給する第1の期間とこの第1の強度と異なる第2の強度を有する電流を光源に供給する第2の期間とを含む周期を繰り返す機能を有し、該第1の期間と該第2の期間は表示情報に従い制御回路により制御されまた、上記階調特性制御回路は同じく表示情報に従い常に良好なコントラストを得るように制御される。

図33



Japanese Unexamined Patent Publication**No. 2002-156950 (Tokukai 2002-156950)**

The following is a partial English translation of exemplary portions of non-English language information that may be relevant to the issue of patentability of the claims of the present application.

Claims:

1. A liquid crystal display comprising:

 a liquid crystal panel; and

 a light source illuminating the liquid crystal panel,
 wherein

 the light source has a cycle which is made up of a period in which the light source exhibits a first radiation luminance and a period in which the light source exhibits a second radiation luminance; and

 the light source has a control circuit which changes the time ratio of the first radiation luminance and the second radiation luminance in the cycle on the basis of externally supplied display data.

2. The liquid crystal display of claim 1, wherein:

the period in which the light source exhibits the first radiation luminance is longer than the period in which the light source exhibits the second radiation luminance; and

the control circuit sets the time ratio of the first radiation luminance in the cycle to less than 50% when the display data represents a moving image and 50% or more when the display data represents a still image.

3. The liquid crystal display of claim 1, wherein the second radiation luminance is in effect 0.

4. The liquid crystal display of claim 1, wherein the control circuit includes:

a data storage storing at least a frame of display data; a data compare section comparing associated pixels between the display data stored in the data storage and input display data; and

a pulse control section supplying a signal controlling the time ratio of the first radiation luminance in the cycle in accordance with the comparison by the data compare section.

5. The liquid crystal display of claim 4, wherein:

the data stores data for some of the pixels in the

display panel as comparison pixels; and

the data compare section compares the data for the pixels stored as the comparison pixels and pixels data of corresponding input data.

[0068] ... In addition, even if the screen has a high net luminance, sufficient luminance is secured by setting the luminance in the stop period to a certain specified luminance, instead of absolutely 0 as shown in Figure 12. It is of course desirable if the period in which the luminance in the stop period is raised is somewhat shortened.

Figure 12

- A Sync signal
- B One cycle
- C Light source luminance waveform, duty 50%, high luminance
- D Light source luminance waveform, duty 50%, medium luminance
- E Light source luminance waveform, duty 50%, low luminance
- F Luminance; dark level